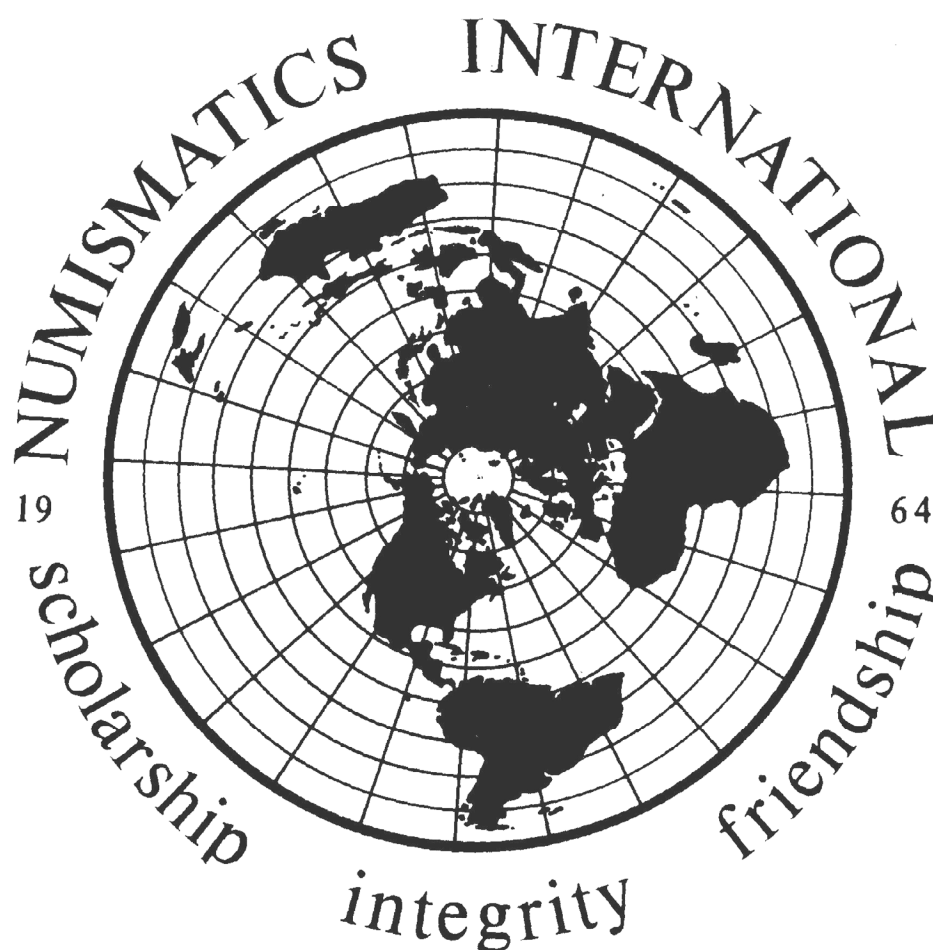


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From the Editor

This edition marks the beginning of my third year as your editor. My thanks to all of you who have contributed articles to the bulletin and/or have assisted me in some way, such as with translation. I also am grateful for support from the Board of Governors and especially want to recognize Dr. Howard Ford.

In this edition we have a well-researched article from Glenn Murray concerning Philip II coins from the mechanized "*el Ingenio*" mint in Segovia, Spain. Robert Ronus writes about a milled Italian coin compared with similar hammered coins. In addition we have articles on coins from Germany, Saint-Martin and Japan. I hope you enjoy them all.



Membership Report

The following persons have applied for membership. Unless objections in writing are received by November 1, 2007, the memberships are effective that day.

- 2700-MT James Bizzell (Worldwide Coins & Currency)
- 2701-MT Mr. A.J. Harmer, Knock-E-Tholt, Douglas Road, Kirk Michael, Isle of Man, via UK (Isle of Man, UK & Newfoundland)
- 2702-MT Jorge Proctor (Spanish Colonial & Panama)

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An Early Milled Italian Crown: Genoa Scudo of 1676

Robert Ronus NI #LM139

The well-established Zurich numismatic firm of Hess-Divo offered two very similar scudi from Genoa in their October 2006 auction. Both had the same Davenport number, 3901. However, one was offered with an estimate of 10,000 Swiss francs, the other with an estimate of 600 Swiss francs. Why the huge difference, even allowing for a difference in grade?



Lot 178 shown 1.25× actual size
Genoa Scudo 1676 (Milled)



Lot 179 shown 1.25× actual size
Genoa Scudo 1693 (Hammered)

Both coins, one dated 1676 and the other 1693, have the same design. The obverse has the Madonna, crowned by seven stars, seated on a bed of clouds, looking right and holding a scepter in her right hand and cradling the baby Jesus in her left arm, within a circle of pearls. The legend reads ET REGE EOS (And Rule Them) followed

by the date and the mint-master's initials, ILM (Iohannus Lucas Maiolus) on the 1676 coin and ITC (Iohannus Thomas Caminata) on the 1693 coin. The reverse has a cross with four stars in the angles within a circle of pearls. The legend on both coins reads "DUX.ET.GVB.REIP.GENV." (Duke and Governor of the Republic of Genoa). This type of *Scudo-stretto* (literally, narrow-scuco, with a diameter of 41-46 mm compared to the 54-60 mm of the *Scudo-largo*, broad-scuco) was struck under a large number of doges in the years from 1638 to 1725. The 17th century issues are Davenport 3901, while the 18th century issues are Davenport 1366, but the designs and the legends are the same.

However, what Davenport does not mention is that, although this type is normally a hammered coin, a few were milled. This is the extremely rare *Scudo-stretto al torchio* ("*torchio*" means "press"), lot 178 in the Hess-Divo sale. Apparently, mint officials were concerned about the disappearance of silver in the traditional hammered process and their inability to control the use of silver. They introduced a mechanical press which allowed the silver use to be tightly controlled. Although not mentioned in the description in the Hess-Divo catalogue, they also put an inscription on the edge of the coin to make it more difficult to shave silver from it (as was, of course, done in many countries). The edge legend reads "PONDERIS * SECURA * FIDES * TVTVMQVE * PRAESIDIUM *" (Secure Guarantee and Safe Protection of Weight). The two Hess-Divo coins suggest the idea worked. The milled coin has a weight of 38.32 g while the hammered coin weighs only 37.82 g.

Despite this, the milling of scudi never became established. Indeed, looking through the very comprehensive *Corpus Nummorum Italicorum*, apart from this 1676 coin (CNI III, p. 406, 11), the only other ones I found were two varieties in 1697 (CNI III, p.438,13 & 14). Lunardi, in his standard work on Genoa coinage, says the coin was minted only in 1676, 1697, 1714 and 1725. According to Hess-Divo, only twelve examples are known, although they did circulate. They are not just patterns. Apparently, milling was not economical. Perhaps the coin hammerers sabotaged the presses!

The rarity of the milled issue is clearly appreciated today. At the Hess-Divo auction Lot 178, the milled coin, was sold for 12000 Swiss francs, while Lot 179, the hammered coin, went for 750 francs.

My thanks to Hans-Joachim Schramm, partner at Hess-Divo, for the original information that led to this article, and for permission to reproduce the information in the Hess-Divo auction catalogue.

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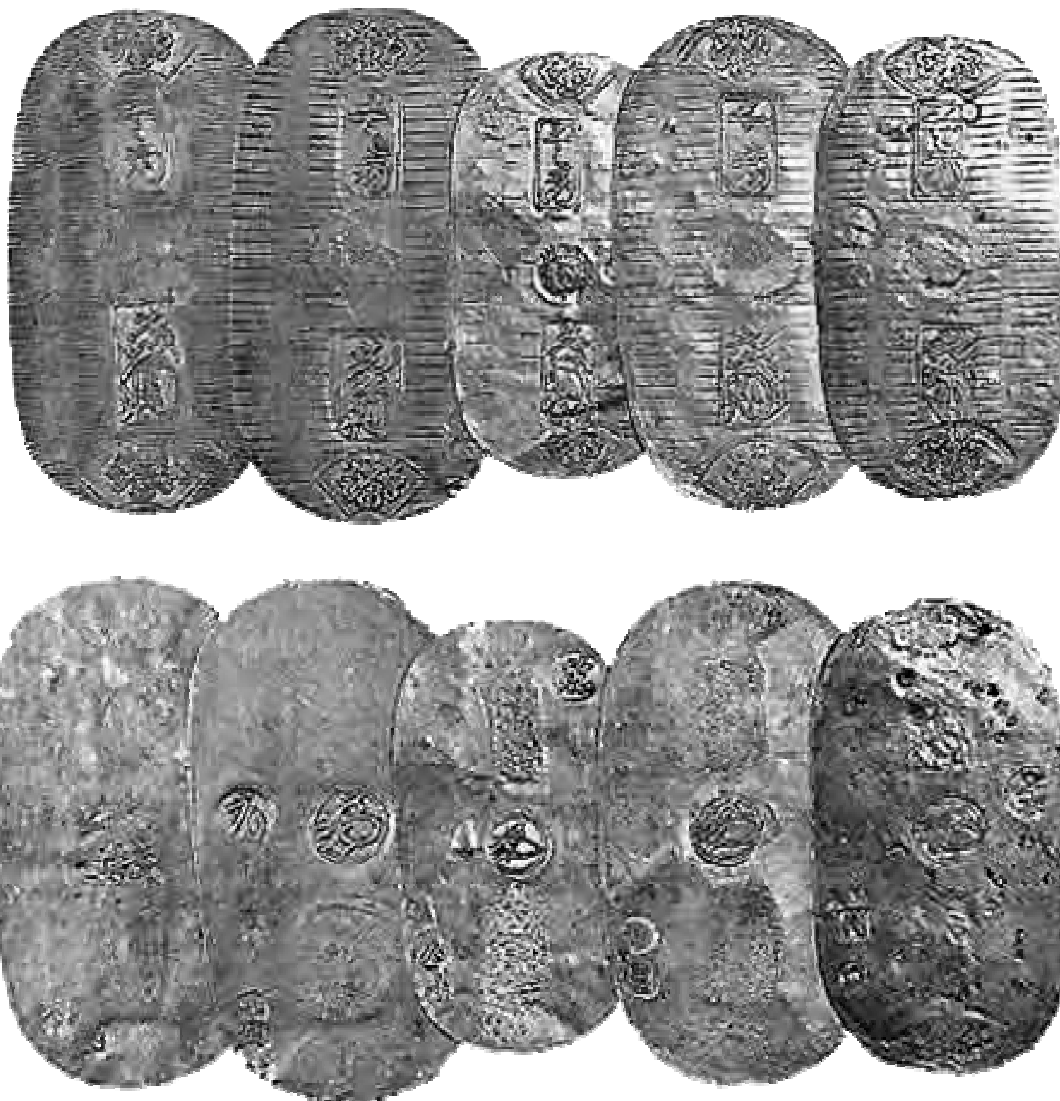
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NI

The Genroku, Hoei, Shotoku, Kyoho, and Gembun Koban **Mari Ohnuki, Institute for Monetary and Economic Studies, Bank of Japan**



Keicho Koban	Genroku Koban	Hoei Koban	Kyoho Koban	Gembun Koban
Approximate mass and fineness				
17.9 g 0.84-0.87	17.9 g 0.57	9.4 g 0.84	17.9 g 0.87	13.1 g 0.66

The *Genroku*, *Hoei*, and *Gembun* Koban have the Japanese characters *gen*, *kan*, and *bun*, respectively, engraved on their reverse sides to indicate the era, but no such engravings appear on the *Keicho*, *Shotoku*, and *Kyoho* Koban. (The *Shotoku* Koban, not illustrated here, is nearly indistinguishable from the *Kyoho* Koban.)

By the *Genroku* Era (the end of the 17th century), the production of gold and silver mines had declined drastically. In addition, large amounts of gold and silver had left the country after a ban on exporting gold was lifted in 1664. This, along with the increasing demand for coins that accompanied economic growth, gave rise to a grave

economic problem—a currency shortage. As a countermeasure against the crisis and to restore its own finances, the Tokugawa Shogunate resorted to re-coinage, debasing the fineness (gold and silver content) and reducing the weight of gold and silver coins. The re-coinage was made possible because of the disconnection of the gold and silver markets in Japan and abroad that accompanied the trade control policy of national isolation.

The shogunate decided to debase its gold and silver coins in 1695. As a result, the fineness of the Genroku Koban was debased to 57 percent, or two-thirds the value of the Keicho Koban in circulation (84-89 percent). Because the Genroku Koban, despite its inferior quality, was exchanged at almost the same rate as the Keicho Koban, the exchange process did not go smoothly. As for the Hoei Koban issued in 1710, although its fineness was improved to 84 percent, the weight was cut by half, and thus the net gold content remained lower than that of the Genroku Koban. The re-coinages enabled the shogunate to restore its fiscal health significantly, but the sharp rise in the money supply induced inflation, damaging many people's livelihoods and reducing some to poverty.

To improve the fineness and weight of gold and silver coins, the Shotoku Koban—identical in quality and weight to the Keicho Koban—was issued in 1714 to replace old gold coins, on the suggestion of Arai Hakuseki (politician, historian and economic advisor to the Tokugawa shogunate). There were rumors, however, that the Shotoku Koban was not equal in quality to the Keicho Koban. Accordingly, in the following year the government issued the Kyoho Koban, which was slightly higher in quality than the Shotoku Koban. Because of this re-coinage and the government's severely reduced budget, the amount of currency in circulation dropped substantially, economic activities came to a standstill, and prices dropped drastically. In particular, the plunge in rice prices had a grave impact on both the samurai class and farmers.

To stimulate the economy and raise prices, the eighth Tokugawa Shogun, Yoshimune, carried out another re-coinage in 1736, lowering the quality of gold and silver coins and increasing their circulation. As had happened with the re-coinage of the Genroku and Hoei Koban, the Gembun Koban was debased. Nevertheless, this re-coinage deserves positive commentary, as it supported the Edo period's economic development from the aspect of currency circulation. Governmental profits from the re-coinage resolved the problem of a currency shortage, succeeded in turning the economy around, and allowed the currency a high degree of stability for the next 80 years.

All images courtesy of Currency Museum, Institute for Monetary and Economic Studies, Bank of Japan.



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Saint-Martin or Sint Maarten

Howard L. Ford, NI #LM90

Numismatists have never paid much attention to some islands in the Caribbean, although vacationers have given them immense amounts of attention, and we are looking at one of those now. St. Martin has had very little recent numismatic history. It did not appear in the *Standard Catalog of World Coins* for the twentieth century and received only very small recognition in the nineteenth century catalog; but some coins were minted in 2004, so we will find them in reference works in the future.

Unlike Hispaniola, which most of us know is divided between two different countries speaking two different languages, Haiti (French) and the Dominican Republic (Spanish), the unique situation of St. Martin is not well known. It is a small island divided between the French North, Saint-Martin, and the Dutch South, Sint Maarten. The island covers only 36-37 square miles, so it is the smallest area in the world to be divided between two separate governments, with two different cultures speaking two different languages. The interesting mixture of cultures on St. Martin creates a fascinating world. In addition to French and Dutch, many other languages are heard on the island, including English, Spanish, and a Creole mix, as well as the native language, Papamiento.

The recently minted coins were patterns, with very small mintages; so we may have seen more of these coins than the islanders ever have. The coins were created for the French Overseas Territories, so they were obviously designed for the French part of the island, the larger part, with about 21 square miles, where the monetary standard is the Euro. A new gold coin, a 20 Euros, showed a species of the native birds, an Osprey in flight with a fish in his talons. A silver 1-1/2 Euro coin showed a French sailing ship, *La Ville de Paris*, which was the flagship of the fleet which blockaded Lord Cornwallis at Yorktown. The obverses of both of these coins show the shield of Saint-Martin; but on the final coin in the set, a 1/4 Euro silver coin, the obverse presents the portrait of the noted nineteenth-century engraver and medalist Oscar Roty, with the reverse showing a lovely vignette from one of Roty's works from 1896, "Science and Liberty."

If we move rather far back in history, we find that the islanders created coinage for themselves. *The Standard Catalog: 1801-1900* indicates that nearly two centuries ago, in the period from 1805-1820, certain coins from other French areas, particularly the French Guiana 2 Sous, would be countermarked with the Fleur-de-Lis and serve as currency on the island (4th Edition, p. 107), probably for the Dutch as well as the French.

The Dutch section now uses the coins of the Netherlands Antilles, with the guilder as the standard. However, if we go back to the 1790s, we find that there is an interesting numismatic history for the Dutch. Some coins are listed for St. Maarten under Netherlands Antilles in the KM catalogue for 1701-1800, and all are counterstamped pieces. Known specimens show an "StM" in a beaded circle stamped on either a French Guiana 2 Sous or a Danish 2 Skilling to create a 2 Stuivers. An 18 Stuivers was made by taking a 1/4 cut out of a Spanish or Spanish Colonial 8 Reales and countermarking it with a bundle of arrows; some of these may also show a "CC" and

the number "18." In a later period, 1817-1820, the French Guiana 2 Sous still equalled 2 Stuivers. However, by this time it took only a 1/5 cut (rather than the previous 1/4 cut) from an 8 Reales to equal 18 Stuivers; these pieces kept the arrows countermark but also had another c/m, "S. Martin," which gives the French spelling on an 18 Guilders and provides another reason for believing that the counterstamped issues would pass easily from one part of the island to the other (2nd edition, p. 900).

In addition to the counterstamped pieces, some of the standard Dutch types made for the West Indies at Traiechtum (the Utrecht Mint) undoubtedly found their way to St. Maarten. These all show a large "W" on their obverses, all are dated 1794, and all are silver: 2 Stuivers, 1/4 Gulden, Gulden, and 3 Gulden. The obverse of the small 2 Stuivers shows the "W" above the date, with a Lion on a crowned shield as the reverse design. The three larger coins all move the lion to the obverse where it divides the denomination. The reverses show the familiar standing female figure leaning on a column topped by a Bible, a design which appears on many of the large coins of the Dutch States (*Ibid.*).

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Additions and Corrections

To Volume 42, No. 7, July 2007.

In Slavoljub Petrović's article *Money as a Mirror of Medieval Serbian Life* we accidentally placed the wrong image for the reverse side in Figure 1. Our apologies to the author. The correct images for Figure 1 are below.



Figure 1
Silver trachy issued by King Stefan Radoslav
(Not shown actual size)

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William I, Bishop of Utrecht
A Denier with Henry IV of Germany
Herman Blanton NI #LM115

The *Investiture Controversy* is arguably the most important dispute between church and state during the Middle Ages. In the feudal system of government the feudal lord appointed officials, including bishops and abbots, within his domains. Otto I, King of the Germans (936-73) and Holy Roman Emperor (962-73), used investiture to strengthen his political power by appointing his own nominees. According to German law, any buildings, including churches, situated on secular (non-church) property were under the administration of the feudal lord; at the top of the feudal system was the king. This enabled Otto to appoint the church officials that he wanted, people loyal to himself, usually family members. Under the Ottonian system, central authority was increased as secular rivals were weakened by the increased power afforded church officials loyal to Otto. Otto's policy helped maintain a balance of power between church and state, since the church officials in Germany were those whom he appointed.

The practice of lay investiture continued through the Ottonian (Saxon) dynasty and the Salian (Frankish) dynasty of Holy Roman Emperors. The issue reached a crisis during the reign of Henry IV. Even a brief account of the Investiture Controversy deserves many pages of text; but we will offer a short introduction of our main interest here, the role of Bishop William of Utrecht. He and Henry are both represented on a denier of Utrecht, illustration courtesy of the Classical Numismatic Group (CNG).



Henry IV of Germany with William I (Bishop 1054-1076),
Silver Denier (19 mm, 0.65 g). Utrecht mint

Obverse: "+HEN(RIC)VS RE," crowned facing bust of Henry IV.

Reverse: "+VVIIIHEINIVS," mantled bust right, holding crosier. De Mey, Utrecht 57; Chijs, Utrecht plate III, 1-3.

William I was Bishop of Utrecht, and a key royal supporter in the Investiture Controversy. (William's office, bishop, is a position of authority in Christian church government with duty to oversee a diocese (church or district), albeit some protestant denominations use other forms of governance. Some English language translations of the Bible use the word *overseer*, while others use the word *bishop*; the meaning is the same.) The chief participants were Henry IV, king of the Germans (1056-1105), Holy Roman Emperor (1084-1105) and Gregory VII (Pope 1073-85).

Gregory VII was a church reformer and was very influential even before his Papal election. The reforming Pope elevated the investiture issue when at the Lenten (Roman) Synod of 1075 he withdrew "from the king the right of disposing of bishoprics in future, and relieved all lay persons of the investiture of churches."¹

Upon receiving the news from the Lenten Synod mentioned above, Henry called the Synod of Worms, Germany, in January 1076. It was both an ecclesiastical synod and a Reichstag (German national council). Of thirty-eight German bishops, twenty-four attended the synod, including William of Utrecht. The synod declared Gregory deposed.² Below is an excerpt of the deposition letter from Henry to Gregory.

For the wisdom of the holy fathers committed even Julian the apostate not to themselves, but to God alone, to be judged and to be deposed. For himself the true pope, Peter, also exclaims: "Fear God, honor the king." But thou who does not fear God, dost dishonor in me his appointed one. Wherefore St. Paul, when he has not spared an angel of Heaven if he shall have preached otherwise, has not excepted thee also who dost teach otherwise upon earth. For he says: "If any one, either I or an angel from Heaven, should preach a gospel other than that which has been preached to you, he shall be damned." Thou, therefore, damned by this curse and by the judgment of all our bishops and by our own, descend and relinquish the apostolic chair which thou has usurped. Let another ascend the throne of St. Peter, who shall not practice violence under the cloak of religion, but shall teach the sound doctrine of St. Peter. I Henry, king by the grace of God, do say unto thee, together with all our bishops: Descend, descend, to be damned throughout the ages.³

Gregory responded with a letter in February 1076 to Henry, deposing him as king, and excommunicating him from church privileges. Below is an excerpt in which Gregory addresses St. Peter, his predecessor as Pope.

I believe it to be through thy (St. Peter) grace and not through my own deeds that it has pleased and does please thee that the Christian people, who have been especially committed to thee, should obey me. And especially to me, as thy representative and by thy favor, has the power been granted by God of binding and loosing in Heaven and on earth. On the strength of this belief therefore, for the honor and security of thy church, in the name of Almighty God, Father, Son and Holy Ghost, I withdraw, through thy power and

¹ <http://www.newadvent.org/cathen/08084c.htm>

² http://en.wikipedia.org/wiki/Synod_of_Worms

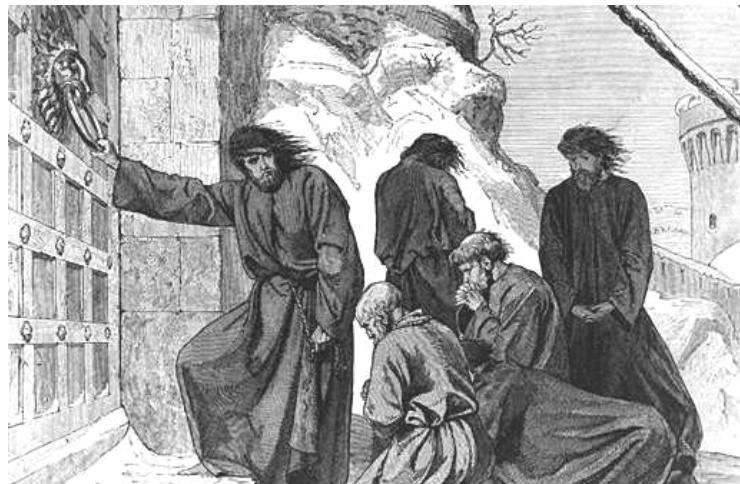
³ Fordham University, *Medieval Sourcebook*. <http://www.fordham.edu/halsall/source/henry4-to-g7a.html>

authority, from Henry the king, son of Henry the emperor, who has risen against thy church with unheard of insolence, the rule over the whole kingdom of the Germans and over Italy. And I absolve all Christians from the bonds of the oath which they have made or shall make to him; and I forbid any one to serve him as king.⁴

Bishop William continued to support his king and to preach against the Pope, but William died shortly after the Pope's letter of excommunication arrived. The interesting citation below is that of a contemporary priest, Lambert of Hersfeld.

Bishop William of Utrecht was an obstinate supporter of the king, in defiance of good and equity, and to uphold the king's cause did much to injure the Roman pontiff. He denounced the latter furiously during the celebration of the mass on almost every solemn feast day, calling him a perjurer, adulterer and pseudo-pope, and announcing that he had many times been excommunicated both by him and by the other bishops. Soon after the king had left Utrecht, after spending Easter there, the bishop suddenly fell gravely ill, and while he was suffering excruciating pain both to his body and soul, he gave a terrible cry, and in front of all those who were present called out that he had, by the just Judgment of God, lost not only this present life but Eternal Life, because he had devoted his talents to striving for the king in the forwarding of his evil work, and in the hope of royal grace he had knowingly and deliberately made grave accusations against the Roman pontiff, a most holy man of apostolic virtues. While saying this, so it was claimed, he passed away, without receiving communion or making any expiation.⁵

After William had died, Henry began to lose the support of his remaining bishops. During the Investiture Controversy the Pope and King deposed each other with the most remarkable event being that of King Henry traveling to the castle of Canossa during winter to perform penance before Gregory.



Wikipedia.

Henry at the gate of Canossa, by August von Heyden
<http://en.wikipedia.org/wiki/Image:Canossa-gate.jpg>

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⁴ Fordham University, Medieval Sourcebook. <http://www.fordham.edu/halsall/source/g7-ban1.html>

⁵ University of Leeds Electronic Text Centre, *The Annals of Lambert of Hersfeld*.
<http://www.etext.leeds.ac.uk/hist1120gregory/hersfeld.htm>

King Philip II and the Missing Assayer Mark on his Coins from the Segovia Mint Glenn Murray (1998)

Without a doubt, one of the greatest mysteries of modern Spanish numismatics is the absence of the assayer's mark on all of the coins that King Philip II struck from his silver ingots¹ at his own private water powered mill mint in Segovia, Spain. We are inspired to publish this article now, since 1998 is the four-hundredth anniversary of the death of Philip II. In addition, it makes a curious anecdote to the *Glossary of Mintmasters and Assayers* recently published by Josep Pellicer i Bru.²



Figure 1

Philip II Segovia 8 reales 1590, aqueduct mintmark vertical left of shield, no assayer
Philip IV Segovia 8 reales 1635, aqueduct mintmark horizontal left of shield with
assayer mark R below.

¹ All of the silver coined at the Royal Mill Mint in Segovia from the first piece struck in 1586 through the death of Phillip II in 1598, belonged personally, to the King. There is no proof, documentary or otherwise, of any gold being coined at this mint during that period. The first silver to be minted there by a private individual was not until 1609, while in the case of gold it was in 1607.

² Published by the Museo Casa de la Moneda (F.N.M.T.), 1997. 425 pp.

As we will see, it is very probable that the assayer mark was purposefully left off of the coins because Philip II was being "prudent"³ in what appears to have been a monetary experiment. The inclusion of the assayer's mark on all Spanish coinage, obligatory since 1497⁴ was a direct response to the need to identify the individual who prepared the alloy, who, for his part, guaranteed that the fineness corresponded to the officially required 11 dineros and 4 grains, in the case of silver coins. The absence of this mark on an entire series of silver coins struck from 1586 through 1598 signals to us a probable anomalous situation with respects to the fineness of these coins: a topic always worthy of numismatic study.

After lengthy investigations of original sources,⁵ it seems strange that we found not a single document which refers directly to the absence of the assayer mark: not a single order, decree, or even the slightest reference to the omission of a symbol which, during this period, traditionally appeared on all Spanish coins. On the other hand, according to the official "instructions" for the minting of coins at Philip II's private mint in Segovia, all coins were to be struck to the same weight, fineness and design standards employed at all the other Spanish mints. Nor were we able to find a single document which ordered the placement of this missing symbol on coins from this Mint during the reign of Philip III, when this occurred. But even stranger, we found not a single document written by a third party in which the absence of the assayer mark is directly questioned,⁶ as if there had been a subsequent search and official destruction of any documented reference to this matter. One thing for sure, we can be certain that the absence of this symbol did not pass unobserved—not by the general public, and certainly not by the assayers at the other mints, or by gold and silver merchants, silversmiths, and other professionals who worked in this field. We did, however, find a few indirect references and indications in documents not specifically related with this affair which enable us to probe this mystery in order to arrive at an explanation.

First however, it is worth noting that no numismatic investigator has ever attempted to explain the missing assayer mark up until now. Casto Maria del Rivero, in his 1915 doctoral thesis on the Segovia Mint simply stated that "the absence of the assayer mark deprives us of the interest in discovering the name of the assayer which corresponds to the symbol."⁷ And Pellicer, in his recent study, correctly identifies the names of the two assayers who worked in the Mint at that time, Juan de Morales⁸ and Joaquin Lingahel,⁹ but does not attempt to explain why their symbol is missing from the coins.

³ King Philip II (1556-1598) is frequently referred to as the "Prudent King."

⁴ Pragmatica de Medina del Campo. Dated June 13th, 1497.

⁵ Documentary sources from the Archivo General de Simancas (AGS), sections: Casa y Sitios Reales (C.S.R.), Consejo y Juntas de Hacienda (C.J.H.) and Contaduría Mayor de Cuentas (C.M.C.).

⁶ The accusations made by the gold and silver merchants, according to the honorable justice Armenteros, as we will see later on, made no mention of the missing assayer mark on the coins.

⁷ *El Ingenio de la Moneda de Segovia*, Madrid, 1919, p. 26.

⁸ On pages 79 and 263 of his book.

⁹ On pages 79 and 229 of his book.

Historical Context

In order to better comprehend the circumstances which surround this affair, a brief analysis is necessary of the historical context in which they occur, along with some considerations as to the personality of Philip II.

To begin with, we should remember that if one thing kept Philip II awake at night, it was his concern about where he was going to obtain more money: a problem which became an obsession after the state bankruptcy in 1575. Geoffrey Parker,¹⁰ in his analysis of the character of the "Prudent King," draws our attention to his attraction to the art of alchemy, for the obvious reason that the ability to transform common metals into gold or silver would immediately resolve his economic dilemma. Parker also reminds us of "the Prudent King's known fondness for secrets and dissimulation tactics," which is another factor which comes into play in our attempt to discover what happened to the assayer mark on his coins. Geoffrey Parker says, "it's in these cases when we need to consider the psychology of the King, as the more we know about the way he thought and made decisions, the greater our chances will be in filling in the voids left by the absence of documents," adding that "as a rational being, the King had good reasons for all his actions."

Owing to his financial difficulties and the other factors mentioned above, it is perfectly rational for us to theorize that the King may have contemplated lowering the fineness of his coins as a method to create more money, as his successors, Charles III and Charles IV,¹¹ would later do in the utmost of secrecy¹² (although these kings did not tamper with the assayer mark). We have previously discovered that the "Prudent King" sent some of his silver ingots in 1582 to be minted at the Lisbon Mint, showing great interest in the benefits which this yielded him since the official fineness for Portuguese coins was only 11 dineros, instead of the 11 dineros and 4 grains required in Spain.¹³

As a backdrop to this affair, we remember that a general confusion reigned during this period as to the correct scientific method for performing assays, a pretext under which the gold and silver merchants of Seville protected themselves in order to commit widespread fraud at nearly all the Spanish mints over a long period of time. One famous assayer, Juan de Arfe, tells us that this confusion came about "because the gold and silver merchants and assayers assumed a mistaken correlation between the silver weight of the mark and the weights used for gold and the castellano."¹⁴ Arfe mentions certain lawsuits in 1585-1586 which pertained to the fineness of practically all the coins struck at the Spanish mints, which later resulted in a massive trial against the merchants and the assayers¹⁵ and the subsequent passing of a new and definitive legislation on the standards and methods of performing assays.¹⁶

¹⁰ Geoffrey Parker, *Felipe II*, Alianza Editorial, 1995.

¹¹ In 1771 and 1786, respectively.

¹² Documents exist today for the debasement order and the oaths of secrecy sworn by the treasurer, assayer and founder of each mint.

¹³ Glenn Murray, "Génesis del Real Ingenio...", *Nvmisma*, No. 232, 1993, p. 192.

¹⁴ Juan de Arfe y Villafañe: "Quilatador de la plata, oro y piedras...." Madrid, 1598.

¹⁵ AGS, C.S.R., *legajo* (bundle of papers) 278.

¹⁶ San Lorenzo, July 2nd, 1588: *Norte de la Contratación*, book I, chapter XXXIII, p. 13; transcribed by Rosa Romero in *Nvmisma*, No. 233, 1993, doc. 1.

In the trials, several gold and silver merchants confessed to having struck debased coinage over a period of more than twenty years, basing their defense on the supposed confusion regarding the technical methods of performing assays. Nevertheless, the authorities judged that the merchants always knew exactly what the fineness of the coinage they produced really was, even if only by "visually observing the coins, which is the truest test," one of them arguing that "it seems to me they cannot plead ignorance according to what they say, since this is their trade and profession, in which they have gained all their wealth and fortune by taking for themselves the silver and gold which should have been in the coins, because they themselves declare it is their knowledge and evidence to know what they earn or lose and if the assayers were performing well their duties, or not."¹⁷

It should not surprise us if the interest that Philip showed for discovering the tricks of the gold and silver merchants and resolving at the same time the technical questions surrounding the proper method of performing assays, led him to conduct a few practical experiments. In such a case, the ideal laboratory would have been his new Royal Mill Mint in Segovia, which was his own private coining factory, as well as the closest mint to his palaces in Madrid and the *Escorial* (palace and monastery complex, San Lorenzo de El Escorial). Along these lines, we should remember that in the first "instruction" which the King gave for the striking of his own silver ingots at the Segovia Mint, he explicitly stated that "although these coins are for test or experimental purposes, they are later to be distributed and spent."¹⁸

The Assayer's Mark

The circumstances surrounding this affair direct us to one basic question: Did Philip II remove the assayer's mark on these coins because he could not truthfully guarantee their fineness? It is obvious that a decision to delete such an important symbol from these coins could have been made only by the King himself, and according to the specimens known today, it seems that this decision was made before the first piece was struck at the new mint.

Was the "Prudent King," who was also devoutly religious, by omitting the assayer mark, washing his hands of any act which might have been questioned by the only authority higher than himself: God? Without a doubt, questions about the fineness of the coins might never have arisen if he had not omitted such a traditional symbol as the assayer mark on his coinage, something that his successors did not omit in similar cases.

In order to probe deeper into this affair, we will investigate the assayer of the new mint, Juan de Morales. In 1583, Morales, then assayer of the mint in Burgos, sent a petition to the King in which he insisted he had discovered a "secret" as to the fineness of silver coinage and its relation to the price of gold, with which, according to him, Spain could circumvent the unequal parity of its coinage with those of other European nations, and thus thwart the foreigners who extracted coins from Spain to

¹⁷ AGS, C.S.R., leg. 277, fol. 22.

¹⁸ AGS, C.J.H., leg. 271-2^a, *carpeta* (folder) 16, pp. 9 and 10.

melt them down at a profit, a "secret" which would yield "a great advantage to the Royal Treasury."¹⁹ Nevertheless, the experts judged that Morales had not discovered anything new, and that he simply implied raising the value of the coinage or lowering its weight or fineness.

Shortly thereafter, in 1585, we find Morales in Madrid performing a special assay for the King. We do not know the nature of this assay, but it appears to have been an experiment or demonstration which lasted 100 days, including ten-day round trip from Burgos to Madrid.²⁰ Apparently, the King was satisfied with Morales because on the first of February, 1586, he was sent a letter with orders to return to Madrid for a special task, but without a hint of what that task would be. The letter, folded and sealed, had the following address on its outer side: "The very magnificent Mister Juan de Morales, assayer of the Mint of the city of Burgos."

"I have written to Mister Antonio that he is to give your mercy, license and order that later, as soon as able, you leave where you are and come to where I await your mercy. And it is convenient that you give speed, for the effect which you are called will be made known to you when you cometh...Your mercy is advised to bring what is necessary to perform an assay, as it will be ordered of you."²¹

Morales Assigned to Segovia

There is always an air of mystery surrounding the actions of Morales, but we know that he arrived in Madrid on February 9th, 1586, and that he was still there on the 21st, because he requested a signed testimony of the fact before a public scribe. Although we have not been able to locate the commission or instruction which Morales himself received for his duties in the Segovia Mill Mint, we know that on February 23, he was assigned there because this is clear in the instruction which Juan Racionero received on that date:

"...later upon receiving this my order, and the other dispatches that with it will be given to you, without delay, you are to leave and go to the said city of Segovia, taking with you Juan de Morales, deputy assayer of the mint of the city of Burgos, whom we have ordered to come to the city of Madrid for this reason...."²²

Racionero was a metals expert who had worked in the mercury mines in the Province of Peru. Philip II put him in charge of the new Segovia Mill Mint "to ascertain its usefulness and benefit...confiding that you will deal with this with your utmost care, diligence and truthfulness, owing to the experience that you have in these matters."²³ This "Instruction of the King, His Majesty, to work the silver," directed to Racionero, is of utmost interest to us because of the subtle alterations it authorizes in the procedure of performing the assay, different from that used in the other Spanish mints.

¹⁹ AGS, C.J.H., leg. 218, carp. 16.

²⁰ AGS, C.J.H., leg. 271-2^a, carp. 16., p. 17.

²¹ AGS, C.J.H., leg. 271-2^a, carp. 16, p. 7.

²² AGS, C.J.H., leg. 271-2^a, carp. 16, pp. 9 and 10.

²³ Idem.

Later on, the accountant general found serious flaws in Racionero's ledgers, apparently originating in the aforementioned instruction. The accountant accused him of "not keeping the book he was ordered to, and of not having signed in the book of the German coiners...and that also, after having adjusted the coins, before blanching and striking them, they be assayed once, after which they be blanché a second time, and this was not done, for which he claimed that although this be customary in the coins struck in the our Kingdom, it cannot be done in the Segovia Mill Mint."²⁴

These shortcomings of Racionero, in which Morales is also implicated, later became the responsibility of the accountant general of the Treasury, whom was ordered by the King in the aforementioned document, to look the other way regarding these and other anomalies in the initial coinage of the Mill Mint. In this decree of March 11, 1588, the King ordered, with respects to the accountant's responsibility: "...and I relieve you of any responsibility or blame that because of this you might be charged with."

Another curious detail which arises from this document is that the scribe of the Mill Mint, the official in charge of registering all the data in the mint's ledgers, was Juan de Morales' brother.

Suspicious

Doubts about the fineness of the alloy used began to emerge as soon as the coins left the mint. The first coins were struck on March 23, 1586,²⁵ and the Count of Chinchon, treasurer of the mint, was already informing the King's secretary on April 2nd, about certain worrisome declarations that Morales had made. According to the Count, "This Juan de Morales says that in not one of all of the mints in this Kingdom are coins struck conforming to regulation fineness, which is 11 dineros and 4 grains, but rather 11 dineros and 2 grains, and from there under; and that if His Majesty, without expressly ordering, permitted him to alloy in the Mill Mint somewhat below the 11 dineros and 4 grains, he would still be alloying finer silver than in all the other mints in the Kingdom, and His Majesty would benefit greatly from the difference between the one and the other."²⁶

In another letter, this one dated April 7th, the Count warned the King's secretary that he should start "undoing Morales' plan, since he has his hands in the batter and intends to remain occupied" at the Mint.²⁷

We should emphasize that there was also another assayer at the Mill Mint, Joaquin Lingahel, a German, who came with the other German technicians in the convoy that brought the machinery from the Hall mint, near Innsbruck, Austria, where it was designed and built. But Lingahel rarely appears in the documents pertaining to the

²⁴ Rivero, *El Ingenio*, doc. 6 p. 60.

²⁵ Glenn Murray, "*La fundación del Real Ingenio de la Moneda de Segovia desde los primeros indicios hasta sus primeras monedas*," *Premios Mariano Grau* (Segovia: Real Academia de Historia y Arte de San Quirce, 1997), p. 487.

²⁶ AGS, C.S.R., leg. 267-2°, folio (sheet, leaf) 176.

²⁷ AGS, C.S.R., leg. 267-2°, fol. 180.

early coinage, and in fact, he protested to the King on numerous occasions that he felt he was serving "without much honor."

On April 8th, the King's secretary wrote the Count expressing the apprehension of the president of the Royal Treasury about the three keys to the security vault at the Mint: Morales had one, Racionero had another, and the Bishop of Segovia, who due to other obligations could not attend the work at the Mint, had the third. He added that "Morales does not want to be accompanied, and although he probably knows how to perform his duties as assayer, he has little knowledge about coining, and he speaks more than his talent permits, and since he has no other occupation or entertainment, he desires to perpetuate himself in this one...."²⁸

Soon, suspicions about the fineness of the coins flowed all around Segovia, exacerbated, we must assume, by the missing assayers mark on the coins. On June 11th, Racionero complained to the president of the Royal Treasury that the Bishop of Segovia had gone to the Mint to withdraw samples of the coinage in order to ascertain its fineness. According to Racionero, "Juan de Morales and I have taken offense with these assays of the Bishop for not showing an order from His Majesty to perform them, and for having said and published, he and others from the Old Segovia Mint, that we only strike coinage here of 11 dineros. And not happy with that, they have sent the German's coins to be assayed at the Toledo, Seville and Granada mints; and what's more, this audacity I consider to be a disservice to the King, who took offense with Juan de Morales, even though he performs his office with truth and much care and diligence; and for my part, I relate that each day he complies with what His Majesty orders...."²⁹

Another document makes reference to a memorandum by Sebastian Muñoz, a Segovian silversmith, in which he suggests that Morales be dismissed. The King's secretary noted that "everyone writes that a different assayer is needed to alloy the silver because Morales is very busy and not very skillful at this."³⁰

Months after all the silver had been struck, Morales was obligated to be put through an examination of his knowledge of assaying techniques, a test apparently designed more to quell the rumors about his abilities than to find specific fault with any particular coins. We say this because the test did not include the inspection of a single coin struck from the silver that Morales had alloyed at the Mint. We can suppose that Morales knew perfectly well how to assay metals; his only problem was that he apparently had some type of order that the alloy at the Mill Mint be of a reduced fineness, which of course would not be evident in this test of his ability.

On December 16th, 1586, the King's secretary sent Morales another of those letters ordering him to appear in person again in Madrid, without offering any details or reason. This letter contains a certain air of importance, but does not impart urgency. Could it be that Morales was to be given orders to cease the debasement experiment

²⁸ AGS, C.S.R., leg. 267-2º, fol. 181.

²⁹ AGS, C.S.R., leg. 267-2º, fol. 186.

³⁰ AGS, C.S.R., leg. 267-2º, fol. 185.

before the next shipment of silver from Seville, not scheduled to arrive in Segovia until mid-January?

We will see later, according to certain account ledgers we have discovered, that the only year in which the coins appear to have a reduced fineness was 1586, the first year of coinage at the new Mint, although the assayer mark remained absent from all the coins produced there during the remainder of Philip II's reign. Is it possible that the King found out everything he wanted to know during the first year of coinage and then put an end to the experiment, but left the assayer's mark off the subsequent coinage so as not to attract any more attention to the affair?

In any case, Morales' dilemma continued to worsen, according to what we gather from a letter Racionero sent to the King on January 3rd, 1587. "Juan de Morales has done in all this only that which in the service of Your Majesty he should have, and in this City he has been intensely followed and persecuted, and today even more than ever. I believe in his ministry of the assay and that he tells the truth. I beg of Your Majesty, that...he receive Your Majesty's favor."³¹

Trial of the Gold and Silver Merchants and Assayers

As we mentioned before, during this period in time there existed a general confusion as to the correct method of performing the assay and as a result, fraud was rampant in all of the Spanish mints. On November 12th, 1587, Philip II ordered that a criminal trial be brought against Juan Castellanos and Company, and other gold and silver merchants, as well as the assayers of various mints. Today, the meticulous details of the proceedings of this trial are available to us in two historical documents: one of more than 1,600 pages,³² and the other of 164 pages,³³ the latter being the conclusions that were reached by the judge commissioned in the case, the honorable Mr. Armenteros, justice of the King's own Court and thus the highest in the Kingdom, including his own private opinion on the outcome, signed and dated on October 12th, 1588. As we recall from other studies, the new regulations specifying the correct and definitive method of performing an assay were dated on July 2nd, 1588, meaning that Armenteros, in his concluding opinions about the trial, already had access to what we could call the true methodology of the assay.

In his private observations on the trial brought against the metals merchants, Armenteros makes the most direct and profound reference we have yet discovered to what we suspect was a purposefully devised scheme by the King regarding the debasement of the coins struck at his Mint. According to Armenteros, referring to certain declarations made by the merchants implicated in the trial, "And what's more, they say that Your Majesty ordered by way of a special permit or notice, dispatched by the Council of the Treasury, that Juan de Morales, the assayer of the Mill Mint that Your Majesty has in Segovia, was to alloy with 5 reales the said silver ingots of purest fineness. I just can't believe it! And if Your Majesty ordered that, he certainly must not have been guided correctly, because by force the alloy would have turned

³¹ AGS, C.S.R., leg. 267-2º, fol. 192.

³² AGS, C.S.R., leg. 278.

³³ AGS, C.S.R., leg. 277, fol. 22.

out to be short 2 grains in fineness. And I plea to God that the favors of these guilty merchants were not the authors of this fraud. And in the case that Your Majesty, by way of his knowledge and Royal powers, has been served that in his Mint the coinage be carried out in this manner, the privilege that has been granted to this Mint because of its curious manufacture and the beauty of it's coins, should not be extended throughout the Kingdom, and it should be restricted only to the mint which Your Majesty has been served to confer it, and it doesn't result in excessive harm, in as much as Your Majesty orders only his own silver to be minted there, and in the Kingdom no one receives any damage, and outside the Kingdom, if Your Majesty is responsible for the debasement of the fineness, Your Majesty will be held accountable."³⁴

Another person who carried out tasks relating to the merchant's fraudulent activities was Francisco Baptista Veintin, who would later be named Chief Assayer of the Realm, an office created in the aforementioned regulation on assays. In 1592, Veintin penned a memorandum in which he requested his salary for the previous six years, including a list of the services which he had performed, which included the capture and arrest of the guilty merchants in the since famous trial. He also assured in his list that he went to Segovia "to perform certain tasks that were required of him for that lawsuit" (probably related to the coinage that the merchants struck in the other mint in Segovia, the "Old Mint") and summarized by pointing out: "I have also dealt with other very serious matters which I will not mention here because His Majesty already has those papers. All of which I have dealt with and performed during those referred to six years."³⁵ We mention this just in case it pertains to something related with the alloy that Morales prepared in the Mill Mint (where no merchant entered to strike coins until during the reign of Philip III); inasmuch as we haven't seen any other matter related to the manufacture of coins during this period that seems to have been treated with such confidentiality as the actions of Morales in the Mill Mint.

Morales' Account Ledgers

The accounts of Morales also present certain signals that attract our attention. To begin with, the account of metals that he was in charge of during 1586, 1587 and 1588, reveal words that have been crossed out alongside a note that cautions that the account only contains the "residuals" of the 1586 coinage. At the end of the account Morales penned: "and if for the credits or debits of what I was responsible for, it be convenient for the service of His Majesty that I give further explanation or clarity, I will do such according to what I have in my ledgers and manuals."³⁶

As a matter of fact, it seems that Morales' bookkeeping was notoriously confidential. In 1597, access to the records of both Morales and Lingahel was requested in an unrelated lawsuit by the heirs of the deputy treasurer of the Mint, who also had served during the time under scrutiny in this essay. This was the normal procedure for verifying records for such purposes. Nevertheless, in this case, the Council of the Treasury deemed this normal method inappropriate, stating, "Because turning these books over to people who are different from those who drew them up, particularly

³⁴ AGS, C.S.R., leg. 277, fol. 22.

³⁵ AGS, C.J.H., leg. 292, carp. 15.

³⁶ AGS, C.M.C., 2^a época, leg. 314.

because they are unaware of the conditions under which they were redacted, could be inconvenient. It seems, if Your Majesty is thus served, that these original books could be ordered to be brought to the General Accounting Office for the verification and knowledge of their content, inasmuch as at the Segovia Mint they are no longer needed nor do they serve a purpose."³⁷

Although we have not found data in the regular account ledgers enabling us to verify the fineness of the coins struck in 1586, we have found a letter dated November 7th of that year which Morales sent directly to Philip II in which he mentions the total weight in pure silver which he processed that year and the total weight of the copper he used in the alloy.³⁸ This data permits us to calculate the fineness of the alloy, which results in exactly 11 dineros and 2 grains, precisely as the honorable justice Armenteros stated in his observations on the trial of the metals merchants. If we next calculate the theoretical benefit which the King obtained by having the entire shipment of silver struck during 1586 with a debasement in fineness of 2 grains, we arrive at 40,334 reales of excess monetary value, which we can then contrast with the more than 1,654,400 reales he obtained through fines and sureties due to the frauds committed by the merchants.

We should point out that the Mint's accounts beginning in 1587 are perfectly documented, and that calculating the fineness of this subsequent coinage, employing the same formula we used for the year 1586, the fineness turns out each year to be just a little above the regulation 11 dineros and 4 granos,³⁹ leading us to conclude that if there actually was an intentional manipulation of the fineness of the Segovia Mint coins by Philip II, it only lasted for only one year.

Conclusions⁴⁰

The absence of the assayer mark on all of the silver coins struck at the Segovia Mill Mint during the reign of Philip II has always been one of the biggest mysteries of modern Spanish coinage and was always worthy of a detailed numismatic investigation. All indications point to a scheme having been put into action by the King regarding the debasement of these coins, and that he himself decided to omit the assayer mark for prudence sake, since he could not guarantee the fineness of the coinage. In support of this theory, we know that the King considered these coins to be part of a "test or experiment," although he ordered them to be "distributed and spent."

Owing to the sequence of events studied, it seems that what the King learned in this experiment permitted him to bring firm charges against the gold and silver merchants and assayers who had been manipulating the fineness of the coinage in all of the mints for more than twenty years, as well as enabling him to do away with the misconceptions surrounding the technical procedures of performing assays and to

³⁷ AGS, C.J.H., leg. 369, carp. 13.

³⁸ AGS, C.S.R., leg. 267-2°, fol. 194.

³⁹ Glenn Murray, "*Las acuñaciones de plata en el Ingenio de Segovia - Felipe II*," unpublished.

⁴⁰ The definitive conclusion about this affair will have to await, for the time being, pending a chemical analysis of a sampling of the coinage in question (using non-destructive methods) to clarify the true fineness of the alloy used.

establish a new and definitive regulation controlling the proper methodology. In this sense, the King must have thought that the best way to catch a criminal, discover his tricks, and calculate his profits, was to recreate the crime in a real-life situation.

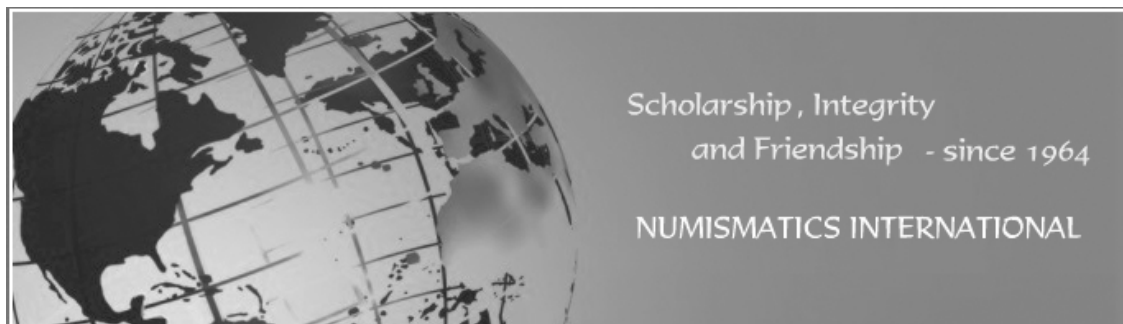
According to several indications, it seems the experiment lasted for just one year, although the assayer mark remained absent from all Mill Mint coinage—even after the definitive regulation for the Mint was given in 1596⁴¹—until after the death of Philip II, not appearing for the first time until several years into the seventeenth century, and then without even the slightest mention in documentary sources thus far discovered.

We should also remember that King Charles III as well as King Charles IV also debased the fineness of coinage in order to create necessary funds, both cases shrouded in absolute secrecy beyond the sworn officials who implemented the order. As a result, it should not surprise us that Philip II could have considered doing the same two centuries earlier, just as our old friend Francisco Baptista Veintín, proposed to Philip III in 1608, while he was Chief Assayer of the Realm, offering to plan the debasement "in such a manner that no one would find out."⁴²

As an anecdote, we could add that King Philip II probably considered the permanent debasement of Spain's silver coinage as being an unwise decision, perhaps because these coins were such a vital part of being able to maintain his possessions in central and northern Europe, opting instead to eliminate the small silver alloy that the copper coinage contained, which only circulated in Castile.⁴³ In such a case, the "Prudent King" probably remembered the harsh warning which the honorable justice Armenteros gave him regarding the coinage that his Royal Treasury sent outside the Kingdom: "...if Your Majesty is responsible for the debasement of the fineness, Your Majesty will be held accountable."

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⁴¹ This regulation would have technically ended any supposed trial phase of the new Mint. "Instruction of December 31, 1596": AGS, C.S.R., leg. 306, fol. 290.

⁴² AGS, C.J.H., leg. 485, carp. 8.

⁴³ By decree of 1596.

The Healing Power of Hobbies

John Regitko

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One of the reasons I keep staying involved in the hobby is for the good of my health. This is confirmed in an article by Shari Caudron in *Readers Digest* that states that hobbies keep us healthy—in both body and mind. Being an enthusiastic hobbyist is good for you, experts agree.

Hobbies reduce stress, says Alice Domar, director of the Mind/Body Center for Women's Health at Harvard Medical School. They distract you from everyday worries. If you're focused on the pottery you're making, you can't fret about work, says Domar. And knitting, or anything requiring repetitive motion, elicits the relaxation response, a feeling of overall serenity, marked by lowered blood pressure.

Hobbies provide a calming sense of control, says Domar, and research suggests this strengthens immunity. You may have little say at work, but when you're woodworking, you're in charge. You get the credit, and satisfaction, of a job well done.

We know that physical activity extends life, but less active pursuits are healthy as well. A Swedish study showed people who regularly engaged in hobbies such as sewing and gardening were less likely to suffer mental decline. Similar research in *The New England Journal of Medicine* found that those who pursued mind-boosting activities, such as crossword puzzles, lowered their risk of Alzheimer's disease or other dementia. Any hobby that challenges the brain should have a positive effect on dementia risk, says lead author and neurologist Joe Verghese.

Many hobbies are social. From dealing cards at bridge to swapping tips with other collectors, engaging with like-minded souls boosts immunity. A Japanese study of almost 12,000 people found that men who engaged in hobbies or community activities were less likely to die of stroke or circulatory disorders than those who didn't.

And there you have it. So keep collecting coins. Others may think you're obsessed but you know otherwise. The mind-boggling activity of attempting to grade your coins or look for those die varieties with a 20× magnifying glass should keep Alzheimer's at bay, but it might just drive you crazy. And attending coin club meetings and coin shows not only gives you exercise and enables you to meet some great people along the way and make life-long friends, but also gets your heart racing when you finally come across that elusive coin that you have been searching for all these years.

And unlike some other hobbies, you most likely will have a nest egg when it is time to retire!

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